Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. – 16. (Canceled)

17. (New) A method of treating a patient for multiple sclerosis comprising administering to the patient a pharmaceutical composition having interferon-beta (IFN-β) activity and comprising a therapeutically effective amount of an isolated IFN-β mutein for treatment of multiple sclerosis (MS), wherein:

(a) the therapeutically effective amount is in a range that is greater than about 500 mcg up to about 1000 mcg, and

(b) the IFN-β mutein has a cysteine at position 17 deleted or replaced by a neutral amino acid.

18. (New) The method of claim 17, wherein the neutral amino acid is selected from the group consisting of serine, threonine, glycine, alanine, valine, leucine, isoleucine, histidine, tyrosine, phenylalanine, tryptophan, and methionine.

19. (New) The method of claim 17, wherein the neutral amino acid is serine.

20. (New) The method of claim 17, wherein the IFN-β mutein lacks an N-terminal methionine.

21. (New) The method of claim 17, wherein the IFN-β mutein is a human IFN-β.

22. (New) The method of claim 17, wherein the IFN-β mutein is BETASERON® (IFN-β $1b_{ser17}$).

23. (New) The method of claim 17, wherein the pharmaceutical composition is a stabilized, human serum albumin-free (HAS-free) pharmaceutical composition.

24. (New) The method of claim 17, wherein the IFN-β mutein is substantially monomeric and solubilized in a low-ionic-strength formulation.

25. (New) The method of claim 24, wherein the low-ionic-strength formulation is a solution having a pH from about 2 to about 5, and an ionic strength from about 1 to about 100 mM.

26. (New) A method of treating a patient for multiple sclerosis comprising administering to the patient a pharmaceutical composition having interferon-beta (IFN-β) activity and comprising a therapeutically effective amount of an isolated IFN-β mutein for treatment of multiple sclerosis (MS), wherein:

(a) the therapeutically effective amount is in a range that is greater than about 500 mcg up to about 625 mcg, and

(b) the IFN-β mutein has a cysteine at position 17 deleted or replaced by a neutral amino acid.

27. (New) The method of claim 26, wherein the therapeutically effective amount of said IFN-β mutein is about 525 mcg

28. (New) The method of claim 26, wherein the therapeutically effective amount of said IFN-β mutein is about 550 mcg.

29. (New) The method of claim 26, wherein the therapeutically effective amount of said IFN-β mutein is about 625 mcg.

30. (New) The method of claim 26, wherein the neutral amino acid is selected from the group consisting of serine, threonine, glycine, alanine, valine, leucine, isoleucine, histidine, tyrosine, phenylalanine, tryptophan, and methionine.

31. (New) The method of claim 26, wherein the neutral amino acid is serine.

32. (New) The method of claim 26, wherein the IFN-β mutein lacks an N-terminal methionine.

33. (New) The method of claim 26, wherein the IFN-β mutein is a human IFN-β.

34. (New) The method of claim 26, wherein the IFN-β mutein is BETASERON® (IFN-β $1b_{ser17}$).

35. (New) The method of claim 26, wherein the pharmaceutical composition is a stabilized, human serum albumin-free (HAS-free) pharmaceutical composition.

36. (New) The method of claim 26, wherein the IFN-β mutein is substantially monomeric and solubilized in a low-ionic-strength formulation.

37. (New) The method of claim 36, wherein the low-ionic-strength formulation is a solution having a pH from about 2 to about 5, and an ionic strength from about 1 to about 100 mM.